

that is human, lowered though it be as the outcast leper of benighted Crete—and a hearty, honest, common-sense view of men and manners, give a good tone and genuine feeling to all his observations. In fact, the naturalist, geologist, geographer, antiquary, and general reader cannot fail to be interested and instructed by this work. Its illustrations are first-rate: two excellent geological and topographical maps; a dozen good chromo-lithographs of scenery, with some other plates; numerous small lithographs on india-paper inserted in the text, besides several woodcuts, are all well executed, and help the reader. A delicately tinted lithograph of *Cestum Veneris* and *Beroë* illustrates a long and careful account of these beautiful creatures. A chapter is devoted to the sponge-divers and their surroundings; and a picturesque group of their fishing-boats is shown in a coloured plate.

Appendices on Cretan and modern Greek (by Viscount Strafford); on Deep-sea Soundings; on Currents in the Mediterranean; on the Salinity of the Black Sea and Mediterranean; on the Geology of Crete, and its relations with Malta and Africa; on the Birds (by Col. Drummond-Hay) and the Land-Shells of Crete; and on the Greek inscriptions found in Crete (by Dr. Churchill Babington), carry out more fully some of the researches and favourite topics of our author.

One of the characteristics of Capt. Spratt is most pleasantly shown in the honest and genial acknowledgment of the labours of his colleagues in the Nautical Survey, of the aid of other friends in his scientific and literary work, and of the strong and lasting influence that he believes the genius and philosophy of his lamented friend Edward Forbes have had in rousing, shaping, and supporting that activity of research which is so handsomely represented by these volumes—which is so well known by many circles of his countrymen and foreigners, and always so modestly referred to by himself.

Handbook of British Water-weeds, or Algæ. By Dr. JOHN EDWARD GRAY, F.R.S., late President of the Botanical Society of London.
The Diatomaceæ, by W. CARRUTHERS, F.L.S. &c. London: Hardwicke, 1865.

THIS little work contains an arrangement of all the Algæ or Water-weeds hitherto recorded as found in Great Britain and Ireland, referred to the most recent genera, and fills up a desideratum that has for several years been felt by the botanical student.

The black- and red-seeded Algæ, which, with very few exceptions, are all marine, are arranged in the families, genera, and subgenera used by Professor Jacob George Agardh in his 'Species, Genera, et Ordines Algarum,' lately published in Sweden, with the alterations suggested in the system proposed by Professor Harvey, in his account of the American Algæ, published by the Smithsonian Institution. The species are all accompanied by a short diagnosis and a reference to the best figure which has been given of them from specimens in a living state, Harvey's 'Phycologica Britannica' being the work almost always referred to.

The Green Algæ (*Chlorospermæ*), which contain both freshwater and marine species, are arranged according to the system proposed by the author in his paper on the distribution of those Algæ, published in the 'Annals of Natural History' for November 1861.

As these plants are very difficult to be distinguished, except in a living state (the chief character often disappearing when they are dry, and indeed often shortly after they are gathered), the author has not attempted to give any diagnosis of the species, but has only referred to the works in which the species or presumed species are figured, preferring, where he can, figures that are taken from living specimens.

Dr. Gray has suggested some improvements in the arrangement of the Algæ. Thus he has proposed to separate the families of *Melanospermæ* used by Agardh and Harvey into three orders, according to the structure of the frond; thus—

Order I. SCYTOPHYCES. Frond leathery or membranaceous, formed of compact cellular substance: containing—1. *Fucaceæ*; 2. *Laminariaceæ*; 3. *Dictyotaceæ*; 4. *Sporochneæ*.

Order II. TRICHOPHYCES. Frond subarticulate, with a jointed axis, and furnished with tufts of pinnate, jointed (deciduous) threads. 5. *Arthrocladiaceæ*.

Order III. ARTHROPHYCES. Frond formed of jointed filaments, which are either free or united into a compound body. 6. *Chordariaceæ*; 7. *Ectocarpaceæ*.

In the families he has characterized three new genera, viz.,

1. *Fasciaria* for *Laminaria fasciata*.
2. *Sphærophorus* for *Ectocarpus granulatus* and its allied species.
3. *Hincksia* for *Ectocarpus Hincksii*.

In the Rhodosperms he regards the anomalous genus *Hapalidium* as the type of a family. It has been suggested that that genus may be only the very young state of *Melobesia*; but this theory wants further examination, as the glassy texture, the form of the frond, and cells are very unlike those of any species of the latter genus, which is always calcareous and opaque, and formed of several layers of cells, even in its thinnest state of development. Again, if it is the young state of that very common and universally spread genus, why is it so seldom observed, when the *Melobesiæ* are to be seen on almost every kind of marine body?

In the Chlorosperms, Dr. Gray has characterized the following genera as new, viz.—

- Leptocystea* for *Cladophora pellucida*.
- Vagabunda* for *Cladophora fracta*.
- Cystothrix* for *Cladophora Rudolphiana*.
- Cystophora* for *Cladophora littorea*.
- Calonema* for *Callothrix mirabilis*.

The list of the Diatomaceæ seems to have been prepared by Mr. Carruthers with great care; and it will be very useful for the collectors of that very numerous and intricate class of minute plants.